

CLAIMS

1. A wheel assembly comprising:

a generally frustoconical wheel having a side wall and a circumferential lateral wall with a tapered outer surface;

a generally frustoconical rim having a side wall and a circumferential annular wall with an outer surface and a tapered inner surface complementary with the outer surface of the wheel; and

a tire attached to the outer surface of the rim.

2. The assembly as defined in claim 1 further comprising fasteners for attaching the rim to the wheel.

3. The assembly as defined in claim 2 wherein the side wall of the wheel defines a plurality of threaded holes and the side wall of the rim defines a plurality of holes alignable with the plurality of holes in the side wall of the wheel; and wherein the fasteners extend through the plurality of holes in the rim and the plurality of holes in the wheel to attach the rim to the wheel.

4. The assembly as defined in claim 3 wherein the fasteners are threaded bolts.

5. The assembly as defined in claim 1 wherein the wheel and the rim have a central axis and the angle of the tapered surfaces in relation to the central axis is one degree.

6. The assembly as defined in claim 1 wherein the tire is solid.

7. The assembly as defined in claim 6 wherein the tire is made of an elastomer.

8. The assembly as defined in claim 1 wherein the rim is manufactured of stamped metal.

9. The assembly as defined in claim 1 wherein the wheel is manufactured of cast metal.

10. The assembly as defined in claim 1 further comprising a flange extending between the side wall and annular wall of the rim; and in which the flange extends outwardly away from the wheel.

11. The assembly as defined in claim 10 wherein the flange provides spring-bias force to keep the annular wall of the rim adjacent the lateral wall of the wheel when the rim is installed on the wheel.

12. The assembly as defined in claim 2 wherein the wheel has a side wall defining at least one recessed area adapted to be partially covered by the side wall of the rim when the rim is installed on the wheel.

13. The assembly as defined in claim 12 wherein the recessed area is annular.

14. The assembly as defined in claim 13 wherein the recessed area is adapted to receive a pry bar.

15. A method of installing a rim and tire on a wheel assembly, comprising the steps of:

providing a wheel having a lateral wall with a tapered outer surface and a rim with an annular wall having an outer surface and a tapered inner surface complementary with the outer surface of the wheel; and a tire attached to the outer surface of the annular wall;

sliding the complementary surfaces over one another until they frictionally engage; and

fastening the rim to the wheel.

16. The method as defined in claim 15 further including the step of applying pressure to the rim to partially install the rim and tire on the wheel.

17. The method as defined in claim 15 further including the steps of:

aligning holes found in the side wall of the rim with the holes found in the side wall of the wheel; and

fastening the wheel to the rim further includes inserting a fastener through each hole in the side wall of the rim and into the aligned holes in the wheel.

18. The method as defined in claim 17 in which the holes in the side wall of the wheel are threaded; in which the fasteners are threaded bolts; and the method further includes the step of fastening the rim to the wheel with the bolts.

19. The method as defined in claim 18 in which the rim includes a flange extending between the side wall and annular wall of the rim; and in which the flange extends outwardly away from the wheel; and the threading step of the method further includes the step of creating a spring bias via the flange which facilitates sliding the rim onto the wheel.

20. A method of removing a rim and tire from a wheel assembly, comprising the steps of:

providing a wheel having a side wall and a lateral wall extending therefrom having a tapered outer surface; a rim having a side wall and an annular wall with an outer surface and a tapered inner surface complementary with the outer surface of the wheel; a tire attached to the outer surface of the

annular wall; the side wall of the wheel defining at least one recessed area partially covered by the side wall of the rim; and fasteners connecting the rim to the wheel;

removing the fasteners;

inserting a pry bar into the at least one recessed area; and

prying the rim away from the wheel with the pry bar.

21. The method as defined in claim 20 in which the rim includes a flange extending between the side wall and annular wall of the rim; and in which the flange extends outwardly away from the wheel; and the prying step of the method further includes the step of creating a spring bias via the flange which facilitates the removal of the rim from the wheel.

22. The method as defined in claim 21 in which the side wall of the wheel defines a plurality of threaded holes and the side wall of the rim defines a plurality of holes spaced around the central hole and aligned with the threaded holes; a plurality of bolts are inserted through the holes in the rim and threaded into the holes in the wheel to attach the rim to the wheel; and in which removing step of the method further comprises the step of:

unthreading the bolts.

23. The method as defined in claim 22 further comprising the step of applying force to the rim to assist in the removal.